

⁷
~~14~~. (original) The waveguide structure of claim ²~~8~~, wherein a taper angle of the interconnection structure is no greater than 0.4 degrees.

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~~15~~. (original) The waveguide structure of claim ²~~8~~, wherein the EO polymer waveguide and the passive polymer waveguide are formed as rib structures.

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~~16~~. (original) The waveguide structure of claim ²~~8~~, wherein the EO polymer waveguide has a higher refractive index than the passive polymer waveguide.

¹⁰
~~17~~. (original) The waveguide structure of claim ²~~8~~, wherein the passive polymer waveguide has a larger mode profile than the EO polymer waveguide.

~~18-19~~. (canceled)

¹¹
~~20~~. (original) The waveguide structure of claim ²~~8~~, wherein the passive polymer waveguide comprises a fluorinated polymer.

¹²
~~21~~. (original) The waveguide structure of claim ²~~8~~, wherein the passive polymer waveguide comprises a fluorinated acrylate.

¹³
~~22~~. (new) A method of operably interconnecting an electrooptic (EO) polymer waveguide and a passive polymer waveguide, comprising:

providing a tapered electrooptic (EO) polymer waveguide interconnection structure between an EO polymer waveguide and a passive polymer waveguide, the passive polymer waveguide including a fluorinated acrylate.

¹⁴
~~23~~. (new) A waveguide structure, comprising:
an electrooptic (EO) polymer waveguide;
a passive polymer waveguide including a fluorinated acrylate; and
a tapered EO polymer waveguide interconnection structure between the EO polymer waveguide and the passive polymer waveguide.

¹⁵
~~24~~. (new) The waveguide structure of claim ¹⁴~~23~~, wherein the EO polymer waveguide and the passive polymer waveguide provide single mode propagation, and the interconnection structure provides a coupling between the two waveguides without higher order mode coupling.

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~~25~~. (new) The waveguide structure of claim ¹⁴~~23~~, wherein an interconnection loss associated with the interconnection structure is less than 0.4 dB.

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~~26~~. (new) The waveguide structure of claim ¹⁴~~23~~, wherein the interconnection structure is vertically tapered.

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~~27~~. (new) The waveguide structure of claim ¹⁴~~23~~, wherein a taper length of the interconnection structure is 300 μm or more.

¹⁹
~~28~~. (new) The waveguide structure of claim ¹⁴~~23~~, wherein a taper angle of the interconnection structure is no greater than 0.4 degrees.

²⁰
~~29~~. (new) The waveguide structure of claim ¹⁴~~23~~, wherein the EO polymer waveguide and the passive polymer waveguide are formed as rib structures.

²¹
~~30~~. (new) The waveguide structure of claim ¹⁴~~23~~, wherein the EO polymer waveguide has a higher refractive index than the passive polymer waveguide.

²²
~~31~~. (new) The waveguide structure of claim ¹⁴~~23~~, wherein the passive polymer waveguide has a larger mode profile than the EO polymer waveguide.

²³
~~32~~. (new) The waveguide structure of claim ¹⁴~~23~~, wherein the EO polymer waveguide comprises a nonlinear chromophore.

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~~33~~. (new) The waveguide structure of claim ²³~~32~~, wherein the nonlinear chromophore includes a tricyanobutadiene acceptor and a phenyltetraene bridge.